

ASOS MODIFICATION NOTE 5 (for Electronics Technicians)

Engineering Division

W/OSO321:BGM

SUBJECT : Firmware Upgrade for Light Emitting Diode Weather Indicator (LEDWI)

PURPOSE : Update firmware on the present weather sensor microprocessor board A1A1A3

EQUIPMENT AFFECTED: ASOS Present Weather Sensor

PARTS REQUIRED : EPROM Version 3.61

MOD PROCUREMENT : The above part will be provided by the contractor, AAI Systems Management, Inc., as an ASOS Field Modification Kit (FMK) #002B. ECP: E93SM05F063

SPECIAL TOOLS : None
REQUIRED

TIME REQUIRED : 1 hour

EFFECT ON OTHER : None
INSTRUCTIONS

CERTIFICATION : This modification was successfully tested for
STATEMENT operational integrity at Sterling, Virginia, and Johnstown, Pennsylvania.

GENERAL

Current production present weather sensors contain version 3.49 firmware. The changes in version 3.61 firmware will help reduce the number of false alarms and false identifications and help with the removal of snow and ice around the transmitter and receiver lenses. The 3.61 firmware allows extended hood heater on time; the heaters will remain on for 5 minutes after beam intensity is reestablished.

PROCEDURE

Follow installation instructions for ASOS FMK #002B provided by AAI Systems Management, Inc.

REPORTING MODIFICATION

Target date for completing this modification is 30 days after receipt of parts. Report completed modifications on WS Form H-28, Engineering Progress Report, according to instructions in EHB-4, part 2, using reporting code ASOS.

J. Michael St. Clair
Chief, Engineering Division

Attachment

W/OSO321:BGM:sol:4/13/93
Disk EHB 10,11,12,"ASOSMOD5.H11"
WP5.1 speller

SID _____

FMK #002B

ASOS FIELD MOD KIT (FMK)

CONTRACT 50-SANW-1-00050

UPON COMPLETION OF MOD, COMPLETE LOWER SECTION
OF THIS SHEET AND RETURN TO:

AAI SYSTEMS MANAGEMENT INC.
11101 GILROY ROAD
HUNT VALLEY, MD. 21030-1108

NOTE: MAKE A COPY FOR ON-SITE RECORDS

Date Prepared: 03/05/93

Task Order/ECP: E93SM05FO63

Part Numbers Affected:

62828-90109-10 LEDWI SENSOR
LEDWI MPU CARD, STI P/N 1901-214

Documentation Included:

DETAIL INSTALLATION INSTRUCTIONS (SEE ATTACHMENT)

Description of Change:

This change is required in all ASOS LEDWI units fielded with the following serial numbers 0041-0309 (including spare cards).
The EPROM located on the MPU card in the LEDWI changes from Rev. 3.49 to 3.61.
The old firmware shall be returned to SMI along with this completed form.

Parts Included: Microcircuit P/N OWI5MPIF Rev. 3.61 1 each

QA Concurrence With FMK: _____

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Date Modification Complete: _____

Part Removed Serial # _____

Part Installed Serial _____

Person Completing Modification: _____

Were FMK Instructions clear/concise: Y / N (circle)

Was FMK complete (parts, drawings, etc.): Y / N (circle)

If NO please comment (use back of form if needed):

Instructions for installing LEDWI Firmware 3.61

I. Replace the LEDWI Firmware

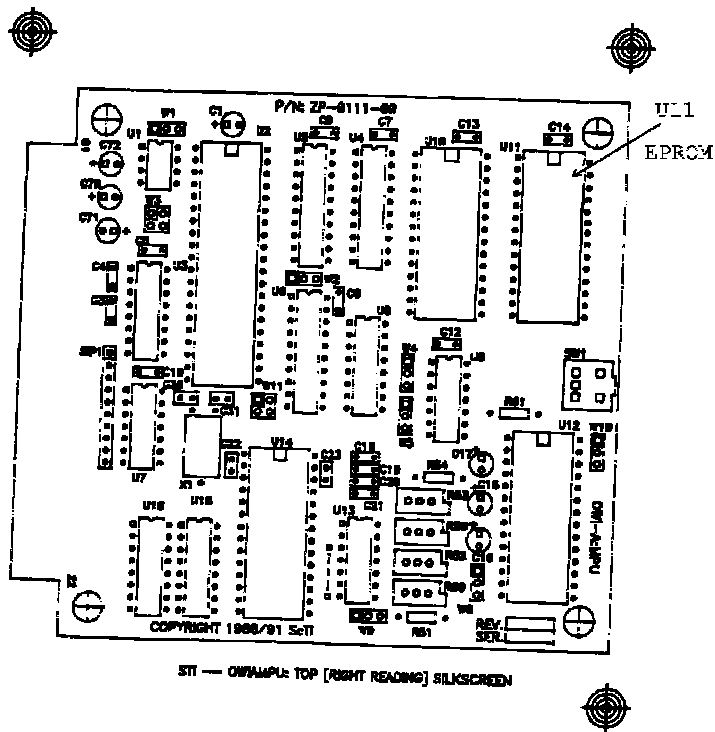
1. At the DCP, turn the LEDWI circuit breakers to 'OFF'.
2. At the LEDWI, open the electronics enclosure door.
3. Remove the MPU card located in the card cage, third slot from the top.
4. Referring to the attached assembly drawing on page 2, carefully remove the EPROM located in the U11 position.

USE CAUTION WHEN REMOVING AND REPLACING THE FIRMWARE!

5. Install the new Rev 3.61 EPROM in the U11 position of the MPU card.
6. Reinstall the MPU card in third slot of the card cage.
7. Close and secure the door of the electronics enclosure.
8. At the DCP, turn the LEDWI circuit breakers to 'ON'.

II. Validate the change

1. At the OID, verify that present weather data is being received on the 12-hour screen. The data will display 'M' for missing while the sensor was turned off.
2. Bring up the LEDWI maintenance screen and verify that the sensor is passing all self-tests. If at least 10 minutes have passed since the sensor was turned on, the data quality should be 'P' for pass also.
3. Clear all errors after the sensor self-test and data quality report pass.
4. Exit the maintenance screen and bring up the syslog 'write' screen. Annotate the changes made to the LEDWI.



SCIENTIFIC TECHNOLOGY, INC.		
2 Research Place		
Rockville, MD 20850		
Title:	CPU-A: MPU CIRCUIT BOARD	
Sheet:	Number:	Revisions:
C	STI-1103-0084	-
Date:	Drawn By:	Checked By:
08/08/91	D. A. WILLIAMS	
File:	Sheet:	of
CPU-A: MPU PCB	1	1